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Title: Quantum integrable systems of Calogero-Moser and Toda type

Abstract: In the first part of these lectures, we present an overview of quantum integrable Calogero-Moser and Toda systems, restricting attention to the N-particle systems with 2D space-time symmetry of Galilei ('nonrelativistic') and Poincar\'e (`relativistic') type.

In the second part, we discuss various results concerning joint eigenfunctions, starting with the reduced N=2 case, where well-known special functions arise. For the many-particle case we only consider the trigonometric and hyperbolic Calogero-Moser and nonperiodic Toda systems. We show how Jack-Sutherland and Macdonald polynomials arise as joint eigenfunctions for the nonrelativistic and relativistic trigonometric regime, resp. For the hyperbolic Calogero-Moser and open Toda systems we sketch a recursive construction of the joint N-particle eigenfunctions, involving so-called kernel functions.